



# UNITED STATES PATENT AND TRADEMARK OFFICE

42  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,563	03/23/2001	Shunpei Yamazaki	SEL 248	9704

7590 10/06/2003  
COOK, ALEX, McFARRON, MANZO,  
CUMMINGS & MEHLER, LTD.  
SUITE 2850  
220 WEST ADAMS STREET  
CHICAGO, IL 60606

EXAMINER

MACCHIAROLO, PETER J

ART UNIT	PAPER NUMBER
----------	--------------

2875

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/815,563

Applicant(s)

YAMAZAKI ET AL.

Examiner

Peter J Macchiarolo

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6, 13-16, 18 and 30-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 13-16, 18 and 30-48 is/are rejected.
- 7) ☒ Claim(s) 1, 13, 34, 39 and 44 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 11 July 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Request for Continued Examination filed on July 11, 2003 consists of changes to the claims and drawings, and further, the reply consists of remarks related to the prior rejection of claims in the previous Office Action. However, pending claims 1-4, 6, 13-16, 18, and 30-48 are not allowable as explained below.

### ***Drawings***

2. The changes to the Drawings, specifically figure 1A, is accepted by the Examiner. However, the Specification has not been amended to make the recitation therein consistent with the amended drawings.

3. Although the amended figure is accepted, the Drawings are now objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, specific layers of the light emitting element comprising an anode, wirings interposed between the anode and insulator, an insulating film, a cathode, and a luminescent material interposed between the anodes and the cathode, with a COG system, as claimed in claims 1, 13, 34, 39, and 44 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

4. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Art Unit: 2875

*Specification*

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

*Claim Objections*

6. Claims 1, 13, 34, 39, and 44 are objected to because of the following informalities:

7. The claims contain the term “anodes” in the clean copy of the claims. The Examiner interprets this word as --anode-- as indicated in the marked up version of the claims.

8. The claims contain the limitations, “one edge” and “both edges of the anode.” There is not proper antecedent basis for these limitations.

9. The limitation in claim 39, “...wherein first stick driver electrically connected...” is being interpreted as, “...wherein a first stick driver is electrically connected...”

10. The claim structure used by Applicant does not conform to standard U.S. practice, and is difficult to interpret. Specifically, the claims do not clearly contain a preamble, a transitional word, or a main body. The multiple occurrences of the term “comprising:” inhibit proper comprehension of the claim’s structure. The Examiner is interpreting the preamble to be, “A light emitting apparatus...the light emitting element comprising:” See MPEP §608.01(m). The Examiner recommends the following claim structure:

[Preamble] [transitional word]:

[limitation X];

[limitation Y]; and

Art Unit: 2875

[limitation Z].

11. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. Claims 34-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.
13. A COG system is not disclosed in the specification to properly enable any person skilled in the art to make the light emitting display. The Examiner notes that page 9 of the instant specification briefly mentions a COG system, but fails to describe what it is. The Examiner is interpreting “by a COG system” as, “to a drive control system.”

Art Unit: 2875

***AS BEST UNDERSTOOD, THE FOLLOWING ART REJECTIONS APPLY.***

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1, 4, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito et al (USPN 5,652,067; “Ito”).

15. In regards to claims 1, 4, and 6, Ito discloses in figure 3, a light emitting device, comprising an anode (2) formed over an insulator (1); at least one wiring (13) interposed between the insulator and the anode wherein the wiring is formed in contact with one edge of the anode; an insulating film (6) covering at least both edges of the anode; a cathode (5) formed over the insulator; and a luminescent material (4) interposed between the anode and the cathode and a power source (11) uses the EL device. Ito further discloses that the anode comprises ITO film <sup>1</sup>.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 2-3, 30, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito.

---

<sup>1</sup> Ito, col. 2, ll. 14-18.

Art Unit: 2875

17. In regards to claims 2-3, 30, and 31, Ito discloses all of the recited limitations of claim 1 (above).

18. Ito further teaches that the anode wiring (13) may have the same construction as those of conventional organic EL devices<sup>2</sup>.

19. Although Ito is silent to the exact composition of the metal wiring, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a metal film from Applicant's recited materials, which are lower in resistance than the anode, to construct Ito's wirings, since this configuration is extremely well known in the art.

20. Claims 13-16, 18, and 32-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinoda et al (USPN 5,661,500; "Shinoda").

21. In regards to claims 13-16, 18, 32, and 33, Shinoda discloses in figure 8, a light emitting device, comprising an anode (41') formed over an insulator (21); a first wiring (42) interposed between the insulator and the anode wherein the wiring is formed in contact with one edge of the anode and extends in a first direction; an insulating film (17) covering both edges of the anode; a cathode (22) formed over the insulator; and a luminescent material (28) interposed between the anode and the cathode. Shinoda further discloses that the first wiring is formed from a copper metal film, and the anode comprises ITO film<sup>3</sup>. Shinoda further discloses in figure 14 that a plasma display device (100) uses the light emitting apparatus.

22. Shinoda is silent to a second wiring formed in contact with another edge of the anode.

---

<sup>2</sup> Ito, col. 19, ll. 66 to col. 20, ll. 2.

<sup>3</sup> Shinoda, col. 9, ll. 64-67.

Art Unit: 2875

23. However, forming a second wiring on the other edge of the anode in a first direction would require mere duplication of the first wiring. It has been held that a duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Further, one of ordinary skill in the art would be motivated to form a second wiring on Shinoda's anode, since this configuration will decrease the response time and power needed to form a discharge between x' and y', which is extremely desirable in large screen plasma displays.

24. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct Shinoda's light emitting apparatus with a second wiring in contact with the other edge of the anode and in a first direction, since this would require mere duplication of the first wiring, and further, this configuration will decrease the response time and power needed to properly power Shinoda's light emitting device.

25. In regards to claims 34-38, and 44-48 Shinoda discloses in figures 8 and 14, a light emitting device, comprising an anode (41') formed over an insulator (21) extending in a first direction, wherein the anode is electrically connected to a first driver circuit (141) which is mounted to a drive control system (2); a first wiring (42) interposed between the insulator and the anode wherein the wiring is formed in contact with one edge of the anode and extends in a first direction; an insulating film (17) covering both edges of the anode; a cathode (22) formed over the insulator, where the cathode is electrically connected to a second driver circuit (143) which is mounted to a drive control system (2); and a luminescent material (28) interposed between the anode and the cathode. Shinoda further discloses that the first wiring is formed



Art Unit: 2875

from a copper metal film, and the anode comprises ITO film<sup>4</sup>. Shinoda further discloses banks (29) are arranged to be orthogonal to the anode.

26. Shinoda is silent to a second wiring formed in contact with another edge of the anode, or how the driver are connected to the anode and cathodes.

27. However, forming a second wiring on the other edge of the anode in a first direction would require mere duplication of the first wiring. It has been held that a duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Further, one of ordinary skill in the art would be motivated to form a second wiring on Shinoda's anode, since this configuration will decrease the response time and power needed to form a discharge between x' and y', which is extremely desirable in large screen plasma displays.

28. Furthermore, one of ordinary skill in the art would arrive at using a metal wire to electrically connect the first driver circuit to the anode, and the second driver circuit to the cathode, since this is an obvious electrical connection means.

29. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct Shinoda's light emitting apparatus with a second wiring in contact with the other edge of the anode and in a first direction, and a metal wire connecting the anode and cathode to their respective drivers, since this would require mere duplication of the first wiring, and further, this configuration will decrease the response time and power needed to properly power Shinoda's light emitting device. Furthermore, using a metal wire is an obvious electrical connection means.

---

<sup>4</sup> Shinoda, col. 9, ll. 64-67.

Art Unit: 2875

30. In regards to claims 39-43 Shinoda discloses in figures 8 and 14, a light emitting device, comprising an anode (41') formed over an insulator (21) extending in a first direction, wherein the anode is electrically connected to a first stick driver (141); a first wiring (42) interposed between the insulator and the anode wherein the wiring is formed in contact with one edge of the anode and extends in a first direction; an insulating film (17) covering both edges of the anode; a cathode (22) formed over the insulator, where the cathode is electrically connected to a second stick driver (143); and a luminescent material (28) interposed between the anode and the cathode. Shinoda further discloses that the first wiring is formed from a copper metal film, and the anode comprises ITO film<sup>5</sup>. Shinoda further discloses banks (29) are arranged to be orthogonal to the anode.

31. Shinoda is silent to a second wiring formed in contact with another edge of the anode, or how the driver are connected to the anode and cathodes.

32. However, forming a second wiring on the other edge of the anode in a first direction would require mere duplication of the first wiring. It has been held that a duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Further, one of ordinary skill in the art would be motivated to form a second wiring on Shinoda's anode, since this configuration will decrease the response time and power needed to form a discharge between x' and y', which is extremely desirable in large screen plasma displays.

33. Furthermore, one of ordinary skill in the art would arrive at using an anisotropic electrically connection to electrically connect the first driver circuit to the anode, and the second

---

<sup>5</sup> Shinoda, col. 9, ll. 64-67.

Art Unit: 2875

driver circuit to the cathode, since it is known that an anisotropic electrical connection can be easily formed. Further, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

34. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct Shinoda's light emitting apparatus with a second wiring in contact with the other edge of the anode and in a first direction, and an anisotropic electrical conductive material connecting the anode and cathode to their respective drivers, since this would require mere duplication of the first wiring, and further, this configuration will decrease the response time and power needed to properly power Shinoda's light emitting device. Furthermore, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

### ***Response to Arguments***

35. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

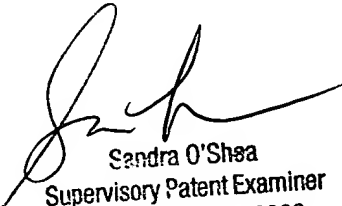
36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (703) 305-7198. The examiner can normally be reached on 7.30 - 4:30, M-F.

Art Unit: 2875

37. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

38. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

pjm



Sandra O'Shea  
Supervisory Patent Examiner  
Technology Center 2800